

REMARKS

The application has been amended and is believed to be in condition for allowance.

Previously pending claims 1-8 have been canceled. Independent claim 9 has been amended to include further recitations. New claim 15 has been added.

The Official Action objected to the abstract. Responsively, the abstract has been amended.

The specification has also been amended.

Claims 1-8 were rejected as anticipated by VOO et al. 5,464,850.

Claims 1-3 and 5-7 were rejected as anticipated by SHIN et al. US 2004/0137633.

Claims 9-14 were rejected as obvious over applicant's disclosed prior art on pages 1-3 and Figure 1 in view of VOO et al.

The amended and newly presented claims are believed to be non-obvious over the prior art for the reasons outlined below.

SHIN et al. disclose a solution which serves as a calibrating solution for an electrochemical sensor including 2-methyl-4-isothiazolin-3-one hydrochloride.

VOO et al. disclose a solution that can be used to calibrate electrochemical sensors, which can be used to determine analytes in biological fluids such as whole blood, serum, plasma

and urine. The solution includes a mixture of 5-chloro-2-methyl-4-isothiazolin-3-one, 2-methyl-4-isothiazolin-3-one and etc.

The structure of the sensor including a substrate and an electrode is disclosed in AAPA or Japanese Laid-Open Patent Publication No. 2000-74870 (USP 6,280,587).

However, the structure of amended claim 9 of the present invention is not disclosed in the above prior art. The structure where the adhesive material which contains a compound containing heterocycle having nitrogen and sulfur heteroatoms formed in the sensor is not disclosed in the prior art.

Further, the sensor of amended claim 9 of the present invention is different from those disclosed in SHIN et al. and VOO et al. The sensor of amended claim 9 contains fluorine. As is disclosed in Japanese Laid-Open Patent Publication No. 2000-74870, by introducing fluorine to the permeation limiting layer, adhesion of contaminants can be prevented. In other words, fluorine is introduced in order to prevent the adhesion of the substances. This teaches away from the present invention and it is therefore not obvious for one of ordinary skill in the art for introducing the adhesive material to the surface of the permeation limiting layer including fluorine.

Further, the prior art does not disclose or mention that the compound containing heterocycle having nitrogen and sulfur heteroatoms can prevent the detachments or cracks of a layer as disclosed in the present application.

By employing the compound containing heterocycle having nitrogen and sulfur heteroatoms at the surface of the permeation limiting layer, the compound adheres to fluorine and the detachments or cracks of film can be prevented. This effect is disclosed on Table 1 (specification page 33) of the present application as follows.

Table 1

	Storage solution 1	Storage solution 2	Referenti al storage solution
5-c-2-m-4-I- 3-o*	0.209ppm	2.089ppm	0ppm
2-m-4-I-3- o**	0.072ppm	0.716ppm	0ppm
MgCl ₂	0.128ppm	1.28ppm	0ppm
Mg(NO ₃) ₂	0.398ppm	3.98ppm	0ppm
TES	100mM	100mM	100mM
NaCl	150mM	150mM	150mM
NaN ₃	0ppm	0ppm	0.1ppm
pH	7	7	7

*5-Chloro-2-methyl-4-isothiazolin-3-one

**2-Methyl-4-isothiazolin-3-one

"As a result, it was observed that there were no film detachments in storage solutions 1 or 2, while in the referential storage solution, there were innumerable cracks in the film surface and grown cracks led to detachment. FIG. 6 shows the results for the referential storage solution with cracks and the storage solutions without a crack.

Analysis of the surfaces of the sensors indicated that 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-

isothiazolin-3-one were attached to the sensors immersed in storage solutions 1 and 2, respectively."

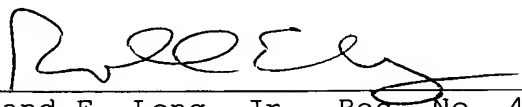
From the above, applicant believes it is clear that the prior art actually teaches away from the invention as now recited. Indeed, it is only the present invention that teaches the non-obvious combination of features that result in the advantageous inventive sensor.

Accordingly, both the independent claim and the dependent claims are believed to be allowable. Reconsideration and allowance of all the pending claims are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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APPENDIX:

The Appendix includes the following item:

- amended Abstract of the Disclosure